REMARKS

Applicants respectfully request reconsideration of this application in view of the foregoing amendment and following remarks.

Status of the Claims

Claims 12-39, 41 and 42 are pending in this application. Claims 1-11, and 43 have been withdrawn from consideration based on a previous election. By this Amendment, claims 12-16 and 18-23 have been cancelled without prejudice or disclaimer. Claims 17, 24, 25, 38, 40 and 41 have been amended herein. Claims 17 and 24 are now the sole independent claims. No new matter has been added by this Amendment.

Rejections under 35 U.S.C. §103

In paragraph six (6) of the office action, claims 17 and 24-39 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Allan and U.S. Patent No. 5,100,237 to Wittekoek et al. ("Wittekoek").

The office action indicates among other things that "[t]he lens element is described as used with a cone angle of at least 35.26'. The cone angle reads on the claimed angles. This reduces birefringence. (col. 3 para. 0026 and Fig. 1)."

Applicants note that the cited portion of Allan recites:

> [0026] ... Consider an example case that includes a cone of light rays at an angle θ of at least cos-1 ({fraction (2/6)}1/2)=35.26 degrees ... Since the cone of light includes these three directions, three equivalent peaks in birefringence should be observed 120 degrees apart in the transmitted intensity. If one considers a similar case except now using the {100} plane as the incident face, it can be shown that the cone of incidence sweeps a larger angle for the same birefringence. Alternatively expressed, the same cone angle has less birefringence when the

{100} plane is used.

As Applicants understand it, the cone as mentioned above in Allan recites the shape of light rays which fall on the surface of the cubic crystal.

In contrast, claim 17 as amended recites "a projection optical system including more than one of the optical elements in which an angle between an [0 0 1] axis of an isometric crystal and an optical axis is less than 10°, the number of the optical elements is n, wherein the optical elements are located with one displaced from another around the optical axis so that an [0 1 0] axis perpendicular to the [0 0 1] axis of one of the optical elements and an [0 1 0] axis perpendicular to the [0 0 1] axis of another of the optical elements form an angle within 90/n ± 10° with each other."

One of the aspects of the present invention as featured in claim 17, for example, is directed to a projection optical system that defines angles among [0 1 0] axes of "n" optical elements in which an angle between an [0 0 1] axis of an isometric crystal and an optical axis is less than 10°. In other words, the angle mentioned in the claim is between the [0 0 1] axis and the optical axis of the crystal, not the angle of light rays fall on the surface of the cubic crystal as in Allan.

Applicants note that Allan fails to show or suggest at least one of the specific teachings of claim 17, i.e., a specific way of arranging plural optical elements and an angle between an [0 0 1] axis of an isometric crystal and an optical axis is less than 10°.

As discussed above, Allan fails to show or suggest at least one specific teaching of claim 17, i.e., specific way of arranging plural optical elements and an angle between [0 0 1] axis of an isometric crystal and an optical axis is less than 10°.

Wittekoek is cited as disclosing multiple element system and use of laser light in projection systems. Wittekoek, however, in no where discloses at least one of the features of claim 17, i.e., specific way of arranging plural optical elements and an angle between a [0 0 1] axis and an optical axis of the isometric crystal is less than 10°.

Accordingly, claim 17 is neither anticipated by nor rendered obvious in view of the cited references (i.e., Allan and Wittekoek), either taken alone or in combination, for at least the reasons discussed above.

Independent claim 24 recites a similar feature to claim 17 as discussed above, i.e., an optical system that has angled axes orthogonal to [1 0 0] axes of plural optical elements in which an angle between a [1 1 0] axis of an isometric crystal and an optical axis is less than 10°. Accordingly, claim 24 is neither anticipated by nor rendered obvious in view of the cited references (i.e., Allan and Wittekoek), either taken alone or in combination, for at least the similar reasons discussed above regarding claim 17.

Each of claims 25-39 depends directly or indirectly from claim 24 and incorporates each and every element of claim 24. Accordingly, each of claims 25-39 is neither anticipated by nor rendered obvious in view of the cited references (i.e., Allan and Wittekoek), either taken alone or in combination, for at least the similar reasons discussed above regarding claim 24.

Reconsideration and withdrawal of the rejections of claims 17 and 24-39 under 35 U.S.C. §102(a) is respectfully requested.

Rejection under 35 U.S.C. §102

In paragraph four (4) of the office action, claims 12-16, 18-23, 41 and 42 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. US 2003/0067679 A1 to Allan et al. ("Allan").

As indicated above, claims 12-16 and 18-23 have been cancelled, rendering the rejections directed to these claims moot.

Each of rejected claims 41 and 42 depends from independent claims 17 or 24 directly and indirectly, and therefore incorporates each and every element of claims 17 and 24, respectively.

Accordingly, Applicants believe that each of claims 41 and 42, in depending from claims 17 or 24, is neither anticipated by nor rendered obvious in view of the cited reference for at least the reasons as discussed above.

Reconsideration and withdrawal of the rejections of claims 41 and 42 under 35 U.S.C. §102(e) is respectfully requested.

Applicants have not individually addressed the rejections of all of the dependent claims because Applicants submit that the independent claims from which they respectively depend are in condition for allowance as set forth above. Applicants however reserve the right to address such rejections of the dependent claims should such be necessary.

AUTHORIZATION

A petition for a one-month extension of time along with the associated fee is enclosed, extending the date for responding until September 8, 2003 (as September 7 falls on Sunday). Should an additional extension of time be required to render this paper timely filed, such extension is hereby petitioned and the Commissioner is authorized to charge any other fees necessitated by this Amendment, or credit any overpayment to our Deposit Account No. 13-4500 (Order No. 1232-4756). **A DUPLICATE COPY OF THIS SHEET IS ENCLOSED.**

An early and favorable examination on the merits is respectfully requested.

Respectfully submitted,
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Dated: September 8, 2003

By: _____
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